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ORIGINAL ARTICLE

Study of quality of life for transsexuals after hormonal and surgical reassignment[☆]

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Summary

Aim. — The main objective of this work is to provide a more detailed assessment of the impact of surgical reassignment on the most important aspects of daily life for these patients. Our secondary objective was to establish the influence of various factors likely to have an impact on the quality of life (QoL), such as biological gender and the subject's personality.

Methods. — A personality study was conducted using Eysenck Personality Inventory (EPI) so as to analyze two aspects of the personality (extraversion and neuroticism). Thirty-eight subjects who had undergone hormonal surgical reassignment were included in the study.

Results. — The results show that gender reassignment surgery improves the QoL for transsexuals in several different important areas: most are satisfied of their sexual reassignment (28/30), their social (21/30) and sexual QoL (25/30) are improved. However, there are differences between male-to-female (MtF) and female-to-male (FtM) transsexuals in terms of QoL: FtM have a better social, professional, friendly lifestyles than MtF. Finally, the results of this study did not evidence any influence by certain aspects of the personality, such as extraversion and neuroticism, on the QoL for reassigned subjects.

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Introduction

The natural definition given by a transsexual of him- or herself is as having a psychological identity, which is different from his or her visible morphological gender. They consider this to be an error of nature, and express great suffering and a strong demand for help to change. Treatment for these

transsexual subjects is based on psychiatric and psychological support alongside hormonal surgical reassignment (HSR) (Chiland, 1992). The main objective of this study was to assess the impact of surgical reassignment on the various aspects of life as seen by the patients, using both a qualitative method (semi-directive interviews) and a quantitative method (standard SF-36 quality of life [QoL] questionnaire).

We also provide some details regarding the influence of certain factors such as original biological gender (male-to-female [MtF] versus female-to-male [FtM]) and the personality (extraversion-introversion and neuroticism-emotional stability) on the QoL for these reassigned subjects.

Hypotheses

Hypothesis 1

Our first hypothesis is that HSR improves the transsexuals' QoL after the operation in several different meaningful areas.

Hypothesis 2

The second hypothesis is that some factors such as the biological gender and the subject's personality could play a role on the QoL of transsexuals after HSR.

Selection of subjects

Thirty-eight subjects were included in the study; they had all undergone HSR over a period of at least two years. We re-elected subjects who had undergone reassignment surgery more than two years ago. The 38 subjects, who were all from different sociocultural backgrounds and age groups (ranging from 32 to 65 years) provided diversified data concerning a broad range of reassigned transsexuals.

Method

Semi-directive interviews: 30 patients were included in this phase of the study. The interviews each lasted one hour. They began with a very general question, to allow the patients to freely express themselves regarding the consequences of their health problems on their daily lives ("How do you feel since the operation; what has changed since?"). Open questions were used so that we could probe for details on items not spontaneously mentioned.

The SF-36 (Ware and Sherbourne, 1992) is a standard QoL questionnaire, suitable for any type of subject, to study their health-related QoL. This self-questionnaire includes 36 questions divided into eight groups:

- physical activity;
- limitations due to their physical condition;
- physical pain;
- perceived health;
- energy levels;
- social life and relationships with others;
- mental health;
- limitations due to mental health.

The Eysenck Personality Inventory (Eysenck, 1953) measures personality in terms of two general and distinct dimensions: extraversion-introversion (E) and neuroticism-emotional stability (N).

Analysis of data

After the semi-directive interviews, everything said by each of the subjects was typed up into a report. These reports were carefully analyzed so as to identify the "verbatim of interest", defined as being a simple phrase expressing the attribution by the subject of value to an element of his or her life.

In terms of analysis of the influence of certain factors such as biological gender and personality on the QoL, an analysis of data provided by the SF-36 and the EPI was conducted using the non-parametric Mann-Whitney test.

Results

Semi-directive clinical interviews

The semi-directive clinical interviews were useful in identifying themes that express the benefits and the difficulties of HSR, as perceived and reported by the reassigned transsexuals themselves. The recurrent and meaningful themes that emerged from the statements of the transsexuals after HSR generally concerned areas either relating to the individual him- or herself, the psychological and physical dimensions of the subject, or relating to his/her social life and relationships. Those relating to the individual him- or herself were more precisely related to their: *psychological well-being, his satisfaction with the operation, the complications suffered after the operation*. Other areas focused more on relationships such as: *social relations, family relations, friendships and work situation*. Sexuality was also an important theme, including *sexual satisfaction, sexual problems encountered, and the frequency of sexual activity*. In addition, aspects such as *the change in civil status, marriage, children and personal activities such as belonging to a club*, are all recurrent concerns expressed by reassigned transsexuals.

QoL for reassigned transsexuals after HSR

The QoL for reassigned transsexuals after HSR was improved in these various areas. The transsexuals are all satisfied with their sexual reassignment (28/30 satisfied and 2/30 moderately satisfied). Their QoL has improved after surgery from a social standpoint (21/30) and sexual standpoint (25/30). However, we did not note any significant change in terms of family, friends and love relationships. On the other hand, we did note differences between MtF and FtM transsexuals in terms of their QoL. FtM transsexuals have a better social and professional life, better friendships and better psychological well-being than MtF transsexuals (Table 1).

Table 1 Consequences of Hormonal-Surgical Reassignment (HSR) on various aspects of life for reassigned transsexuals, as reported during the semi-directive interviews: the results are presented for the group of transsexuals as a whole, and specifically for male-to-female (MtF) and female-to-male (FtM) transsexuals.

	FtM transsexuals (N = 15)	MtF transsexuals (N = 15)	Total transsexuals (N = 30)
<i>Satisfaction with the reassignment</i>			
Satisfied	13	15	28
Moderately satisfied	2	0	2
Dissatisfied	0	0	0
<i>Complications</i>			
Yes	10	6	16
No	5	9	14
<i>Social integration, personal relationships</i>			
Better than before reassignment	10	11	21
No change	5	4	9
Worse than before reassignment	0	0	0
<i>Quality of romantic relationships/love life</i>			
Better than before reassignment	5	5	10
No change	10	9	19
Worse than before reassignment	0	1	1
<i>Quality of family relationships</i>			
Better than before reassignment	6	4	10
No change	9	10	19
Worse than before reassignment	0	1	1
<i>Friendships</i>			
Kept the same friends	11	7	18
Changed friends	4	8	12
<i>Work situation</i>			
Work situation has improved	5	3	8
Work situation has stayed the same	8	7	15
Work situation has deteriorated	2	5	7
<i>Sexuality</i>			
Satisfied	10	15	25
Moderately satisfied	0	0	0
Dissatisfied	5	0	5
<i>Ability to reach orgasm</i>			
Better than before reassignment	9	11	20
No change	5	0	6
Worse than before reassignment	1	4	4
<i>Marriage</i>			
Married after reassignment	6	3	9
Unmarried after reassignment	9	12	21
<i>Children</i>			
Has had a child after reassignment	5	0	5
Currently wants a child	4	0	4

SF-36 data

The SF-36 data showed that FtM transsexuals have better relationships (mean score 88.15 for FtM versus 71.71 for MtF), better mental health (90.25 FtM versus 88.95 MtF) and generally speaking, see themselves to be in better health than MtF transsexuals. These data have a confidence interval of 95%. FtM transsexuals are more likely to feel limitations (embarrassment in their daily lives) related to their physical condition (85.53 FtM versus 73.68 MtF) and their emotional

state (89.47 FtM versus 82.46 MtF) than MtF transsexuals. These data have a confidence interval of 80%.

EPI data

The EPI data did not evidence any differences between the extrovert and introvert subjects as far as perception of their QoL was concerned. Similarly, there was no notable difference between subjects with a "high neuroticism score" and subjects who were seen to be "emotionally stable".

Table 2 Comparison between scores on the various aspects of SF-36 for extroverted and introverted subjects.

Aspects of SF-36	Mean score for extroverted subjects	Mean score for introverted subjects	P
SF-PHY: physical capabilities	89.43	91.67	0.978
SF-SOC: social life	78.64	83.33	0.867
SF-PBPHY: limitations due to physical condition	77.86	100.00	0.187
SF-PBPS: limitations due to emotional condition	84.76	100.00	0.261
SF-PSY: mental health	70.05	77.33	0.314
SF-VITAL: energy levels	62.57	75.00	0.253
SF-DOUL: physical pain	72.23	80.67	0.911
SF-SP: perceived health	81.43	78.00	0.530
PCS: physical composite score	54.76	52.54	0.935
MCS: mental composite score	53.79	51.50	0.367

Table 3 Comparison between scores on the various aspects of SF-36 for subjects with a "high level of neuroticism" and subjects that are "emotionally stable".

Aspects of SF-36	Mean score for subjects with a high score on "neuroticism"	Mean score for subjects that are "emotionally stable"	P
SF-PHY: physical capabilities	91.56	88.18	0.963
SF-SOC: social life	78.90	80.68	0.615
SF-PBPHY: limitations due to physical condition	82.81	77.27	0.837
SF-PBPSY: limitations due to emotional condition	83.33	87.87	0.392
SF-PSY: Mental health	70.50	70.72	0.964
SF-VITAL: energy levels	64.37	62.95	0.548
SF-DOUL: physical pain	74.62	71.63	0.784
SF-SP: perceived health	79.56	82.31	0.264
PCS: physical composite score	52.88	51.24	0.496
MCS: mental composite score	53.44	50.29	0.535

Nevertheless, the numbers of subjects with a "high neuroticism score" and subjects who are "emotionally stable" are better balanced and enable a more appropriate comparison to be made (Tables 2 and 3).

Discussion

According to our main working hypothesis, HSR improves the QoL for transsexuals after their surgery in several meaningful areas. Our results are totally in line with those found in literature (Abramowitz, 1986; Pfafflin and Junge, 1992; Cole et al., 1997; Bodlund et al., 1993; Eldh et al., 1997; Rehman and Lazer, 1999) and confirm our hypothesis by which there are differences between MtF and FtM transsexuals after HSR. We can indeed note that reassignment would appear to have more positive consequences for FtM than for MtF transsexuals in the socioprofessional, relationship and psychological domains. These results can be explained by the fact that FtM transsexuals have less difficulty in finding their place in society than MtF. This result also confirms the findings of Lothstein (1983) who reported that FtM transsexuals are more stable, adapt better to HSR and present fewer psychopathological disturbances. In addition, the analysis of our interview reports showed that MtF transsexuals have fewer surgical complications and appear more sexually satisfied. However, this result should be somewhat mitigated, since

four MtF and only one FtM had lost the ability to achieve an orgasm. These results can be explained by the fact that transsexuals who do not achieve orgasm tend to explain this particularity by their issues with body image. According to these results, it could be possible to change sexual identity, body image and be sexually satisfied despite dissatisfaction with genital reconstruction.

The lack of data in the literature concerning investigations into family and relationship aspects of life for transsexuals prevents us from comparing our results to those found in other studies. However, in our sample, romantic and family relationships were not affected by the HSR and remained the same as before the reassignment. Quite clearly the HSR does not appear to bring about any improvement in understanding on the part of the close family and friends. The family does not understand the subject's identity issues and does not adapt to them. It would appear that the family environment is too deeply influenced by the prejudices of society at large, instead of trying to understand the feelings of their transsexual friend or relative. Nevertheless, it is true that the situation is difficult for not only the transsexuals, but also for their families. One should note that FtM transsexuals are more likely to marry (6/15 for FtM versus 3/15 for MtF) and have children than MtF since only FtM transsexuals in this study were able to have a child.

Table 4 Presentation of the sample according to personality type: extrovert subjects, introvert subjects, “abnormally neurotic” subjects, “emotionally stable” subjects.

	Sample	Extrovert subjects	Introvert subjects	“Neurotic” subjects	“Emotionally stable” subjects
Number	38	35	3	16	22

Our hypothesis whereby HSR improves the QoL for transsexuals is therefore confirmed, as is the supposition that biological gender has an impact on the QoL of reassigned patients.

Our second hypothesis suggests that there are factors such as biological gender and personality, which might play a role in the QoL for transsexuals after reassignment.

Very little research has been done into the link between personality and QoL, and none of this research has concerned transsexuals. In our study, the results did not evidence any influence of personality factors such as extroversion or neuroticism on the (perceived) QoL for transsexual subjects after HSR. The large proportion of extroverts is worthy of mention (35/38), that is, characteristics of impulsivity, lack of inhibition, lack of self-control, risk-taking, quest for strong sensations. From a clinical point of view, this goes hand in hand with a stable personality, which should be carefully assessed before embarking upon the protocol so as to obtain a good indicator of the patient’s capacity to adapt to the future situation (Table 4).

Globally, these results did not confirm our hypothesis by which the two dimensions of personality, that is, extraversion-introversion and neuroticism-stability had an influence on the perception by reassigned transsexuals of their QoL, and this applied to all the areas taken into consideration.

Conclusion

Our research shows that MtF transsexuals have fewer surgical complications (9/15 MtF versus 5/15 FtM) and would appear to be more sexually satisfied (15/15 MtF versus 10/15 FtM). We can also note that the HSR seems to give more satisfactory results for female transsexuals FtM concerning aspects where relationships and aesthetics are important, whilst it creates fewer surgical complications and would seem to give more satisfactory “functional” results for male

MtF transsexuals. As far as we know today, and on the basis of a standardized QoL questionnaire (SF-36), HSR improves QoL to an extent that can justify this type of treatment. The results of this study could be improved by means of a more specialized and detailed QoL questionnaire specific to this population. To achieve this aim, we intend to continue work on such a questionnaire, firstly identifying the items to be included in the questionnaire, then in the quantitative phase, selecting the items and assessing the psychometric properties of this questionnaire specific to reassigned transsexuals.

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